

MULTI-STAGE MULTI-PLANE COMBUSTION METHOD FOR A GAS TURBINE ENGINE

ABSTRACT OF THE DISCLOSURE

A low emissions combustion method wherein, in an embodiment, a plurality of tangential fuel injectors introduce a fuel/air mixture at the combustor dome end of an annular combustion chamber in two spaced injector planes. Each of the spaced injector planes includes multiple tangential fuel injectors delivering premixed fuel and air into the annular combustor. A generally skirt-shaped flow control baffle extends from the tapered inner liner into the annular combustion chamber downstream of the fuel injector planes. A plurality of air dilution holes in the tapered inner liner underneath the flow control baffle introduce dilution air into the annular combustion chamber while another plurality of air dilution holes in the cylindrical outer liner introduces more dilution air downstream from the flow control baffle.

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